

Herpetofauna of NPS Units in the Northern Great Plains

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Units Surveyed

- Scotts Bluff National Monument, NE
- Fort Laramie NHS, WY
- Devil's Tower National Monument, WY
- Mount Rushmore NM, SD
- Jewel Cave NM, SD
- Fort Union NHS, ND
- Knife River Indian Villages NHS, ND

Previous Publications

- Wyoming: Baxter and Stone (1985)
- Nebraska: Lynch (1985)
- South Dakota: Ballinger et al. (2000)
- North Dakota: Wheeler and Wheeler (1966)

Methods

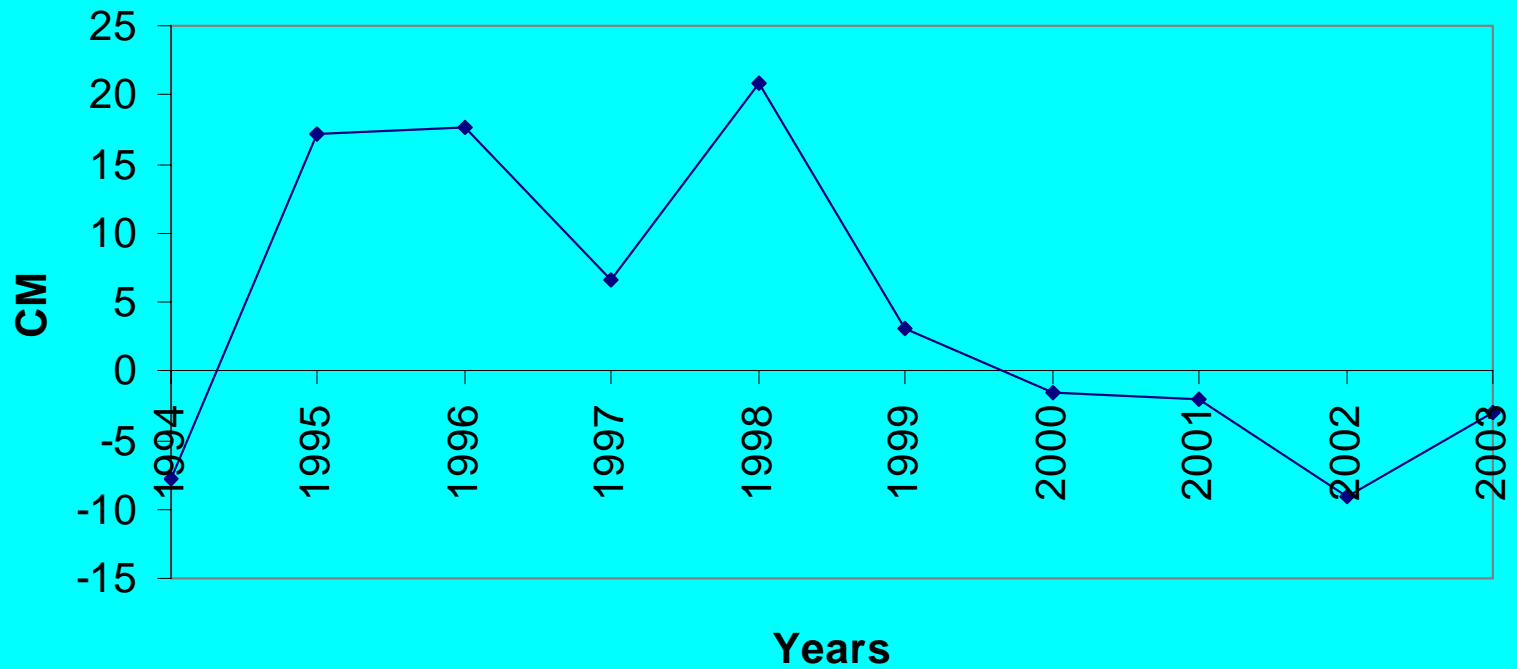
- Visual encounter surveys
- Nighttime call surveys
- Night driving or trail walking
- Prairie dog town surveys

Survey Bias

- Non-random searching
- Targeted habitat
- Targeted species
- No drift fences

Drought

**Yearly Precipitation Departure From Average
Jewel Cave**



Results: VES

- 384 hours of surveys
- 109 specimens
- Success = 0.141 specimen/hour (2002)
- Success = 0.449 specimen/hour (2003)

Results: Prairie dog towns

- 12 surveys conducted
- Salamanders on three surveys
- Success = 25%

Results: Call surveys

- 214 surveys conducted (53.5 hrs)
- 103 choruses found
- Success = 48.0%
- Survey success constant across years

Conclusions: VES

- Inexpensive
- Determines presence/absence of species
- Can determine relative abundance
- Must be conducted near water sources

Conclusions: Salamanders

- “Prairie dog town” searches effective
- Also inexpensive
- Determine presence/absence of adults

Conclusions: Calling Surveys

- Good for common species
- Poor for “weather dependent” species
- Must be on park in appropriate weather

Management Issues

- Protect water sources from human-induced manipulation
- Monitor water sources for degradation
- Monitor water sources during drought
- Remove spring boxes
- Remember upland habitat
- Snake dens
- “Problem” snakes

Survey Issues

- Education: Identification of rare species
- Education: Call surveys
- Important: Survey during appropriate weather (amphibians)











Monitoring

- Frog call surveys—northern leopard frogs
- Snake surveys—garter snakes
- Snake surveys—rattlesnakes at densites

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